

What is Claimed Is:

1. A method in a signaling network node having a prescribed point code, the method comprising:

detecting a prescribed condition for at least an affected signaling node associated with a corresponding affected point code;

5 generating a route management signaling message in response to the prescribed condition, by:

(1) first inserting the prescribed point code into an originating point code field, a destination point code for a corresponding destination signaling node into a destination point code field, and the affected point code into a third point code field,

10 (2) selecting a signaling link selection value based on the affected point code, and

(3) second inserting the signaling link selection value into a prescribed signaling link selection field in the route management signaling message; and

outputting the route management signaling message onto a signaling network for delivery to the destination signaling node via a path selected based on the signaling link selection value.

2. The method of claim 1, wherein the generating step includes generating the route management signaling message as an SS7 Message Transfer Part 3 (MTP3) route management message.

3. The method of claim 2, wherein the selecting step includes:

determining whether the affected point code identifies a cluster that includes the affected signaling code; and

selecting a first portion of the affected point code that distinguishes the prescribed cluster from other clusters for generation of the signaling link selection value, if the affected point code identifies the cluster relative to the other clusters.

4. The method of claim 3, wherein the step of selecting a signaling link selection value further includes selecting a second portion of the affected point code, distinct from the first portion, if the affected point code does not identify a cluster.

5. The method of claim 4, wherein the step of selecting a second portion includes identifying the second portion to be selected based on a configuration register set by a user.

6. The method of claim 4, wherein the step of selecting a second portion includes using a prescribed number of least significant bits from the affected point code as the second portion.

7. The method of claim 3, wherein the step of selecting the first portion includes selecting a cluster number from the affected point code.

8. The method of claim 2, wherein the selecting step includes mapping the affected point code to the signaling link selection value using a prescribed mapping function.

9. The method of claim 2, wherein the outputting step includes identifying an available outbound link based on accessing a signaling link selection - outbound link table configured for identifying, for each available signaling link selection value, an assigned available outbound link.

10. A signaling network node having a prescribed point code and further comprising:
means for detecting a prescribed condition for at least an affected signaling node associated with a corresponding affected point code;

means for generating a route management signaling message in response to the prescribed condition, by:

(1) first inserting the prescribed point code into an originating point code field, a destination point code for a corresponding destination signaling node into a destination point code field, and the affected point code into a third point code field,

(2) selecting a signaling link selection value based on the affected point code, and

(3) second inserting the signaling link selection value into a prescribed signaling link selection field in the route management signaling message; and

means for outputting the route management signaling message onto a signaling network for delivery to the destination signaling node via a path selected based on the signaling link selection value.

11. The node of claim 10, wherein the generating means is configured for generating the route management signaling message as an SS7 Message Transfer Part 3 (MTP3) route management message.

12. The node of claim 11, wherein the selecting means is configured for:
determining whether the affected point code identifies a cluster that includes the affected signaling code; and

selecting a first portion of the affected point code that distinguishes the prescribed cluster from other clusters for generation of the signaling link selection value, if the affected point code identifies the cluster relative to the other clusters.

13. The node of claim 12, wherein the selecting means is configured for selecting a second portion of the affected point code, distinct from the first portion, if the affected point code does not identify a cluster.

14. The node of claim 13, wherein the selecting means is configured for identifying the second portion to be selected based on a configuration register set by a user.

15. The node of claim 13, wherein the selecting means is configured for using a prescribed number of least significant bits from the affected point code as the second portion.

16. The node of claim 12, wherein the selecting means is configured for selecting the first portion by selecting a cluster number from the affected point code.

17. The node of claim 11, wherein the selecting means is configured for mapping the affected point code to the signaling link selection value using a prescribed mapping function.

18. The node of claim 11, wherein the outputting means includes a signaling link selection - outbound link table configured for identifying, for each available signaling link selection value, an assigned available outbound link, the outputting means configured for identifying an available outbound link based on accessing the signaling link selection - outbound link table.

19. A computer readable medium having stored thereon sequences of instructions for outputting a route management signaling message by a signaling network node having a prescribed point code, the sequences of instructions including instructions for:

5 detecting a prescribed condition for at least an affected signaling node associated with a corresponding affected point code;

generating a route management signaling message in response to the prescribed condition, by:

10 (1) first inserting the prescribed point code into an originating point code field, a destination point code for a corresponding destination signaling node into a destination point code field, and the affected point code into a third point code field,

 (2) selecting a signaling link selection value based on the affected point code, and

 (3) second inserting the signaling link selection value into a prescribed signaling link selection field in the route management signaling message; and

15 outputting the route management signaling message onto a signaling network for delivery to the destination signaling node via a path selected based on the signaling link selection value.

20. The medium of claim 19, wherein the generating step includes generating the route management signaling message as an SS7 Message Transfer Part 3 (MTP3) route management message.

21. The medium of claim 20, wherein the selecting step includes:
determining whether the affected point code identifies a cluster that includes the affected
signaling code; and
selecting a first portion of the affected point code that distinguishes the prescribed cluster
from other clusters for generation of the signaling link selection value, if the affected point code
identifies the cluster relative to the other clusters.

22. The medium of claim 21, wherein the step of selecting a signaling link selection value
further includes selecting a second portion of the affected point code, distinct from the first portion,
if the affected point code does not identify a cluster.

23. The medium of claim 22, wherein the step of selecting a second portion includes
identifying the second portion to be selected based on a configuration register set by a user.

24. The medium of claim 22, wherein the step of selecting a second portion includes using
a prescribed number of least significant bits from the affected point code as the second portion.

25. The medium of claim 21, wherein the step of selecting the first portion includes selecting
a cluster number from the affected point code.

26. The medium of claim 20, wherein the selecting step includes mapping the affected point
code to the signaling link selection value using a prescribed mapping function.

27. The medium of claim 20, wherein the outputting step includes identifying an available
outbound link based on accessing a signaling link selection - outbound link table configured for
identifying, for each available signaling link selection value, an assigned available outbound link.